IHSA 82-018

12 April 1982

MEMORANDUM FOR: [redacted] STAT
Chief, Policy and Plans Group/MS/ODP

FROM: [redacted] STAT
Information Handling Systems Architect

SUBJECT: NBSIR 81-2315, Draft Specification for a Structured Data Interchange Form

REFERENCE: Your Memorandum, Same Subject, ODP 82-123, dated 29 January 1982

1. We have reviewed the referenced draft specification and offer several observations for your consideration. While we understand the importance of efficient data exchange, it is our opinion that this draft inadequately addresses several complex areas and therefore we question the feasibility of the proposal. Some specific factors which we believe should be considered are:

- There is seldom a need to transfer the entire data content (alone) between data bases and/or systems. The source data base or system should be accessed for entire content use. Specific subsets of data bases/systems should be specifically defined when transferred.

- Many DBMSs have imaginative and unique data creation, storage and display techniques which employ subordinate data element access. It is features like this that make certain DBMSs desirable for certain specific applications and to require the data element per se to be transferred may be difficult and costly. As exemplified in this proposal, the "overhead" costs can become exorbitant.

- Many data bases have data elements which exist only through software manipulation of other data elements. Because the proposal does not specify software integration into this transfer process such data could not be handled.

- We would appreciate an explanation of how this proposal handles several areas such as multi-valued variable length data elements and variably concatenated fields.

2. The proposal attempts too high a level of detail in transfer specification. We firmly believe in and support standardization, but, in this case, at a lower level such as data type, and medium. Further, to require data base/system designers to provide the "cover all possibilities" capability as proposed here, would stiffle initiative, add excessive software overburden and be prohibitively expensive. Because of the complexities cited, data transfer, when required, is best accomplished by specific documentation for each case or class of transfer. Unfortunately, the "universal transfer mechanism" does not appear to be reasonably feasible, at least at the current state of DBMS technology.

3. If you should wish to pursue any of these points more specifically, please call [redacted] of this office. STAT

/s/

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